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Appl. No.: 10/824,234

Amdt. Dated September 13, 2006

Response to Office Action Mailed July 14, 2006

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in this application.

1. (Currently Amended) An electronic surveying apparatus, comprising:
 - a storing portion ~~for storing~~ configured to store positional data of a surveying apparatus body and design data as construction-related data;
 - an angle-measuring portion ~~for measuring~~ configured to measure an aimed direction relative to a reference direction;
 - an arithmetic processing portion ~~for obtaining~~ configured to obtain a model of an expected arrangement at completion of an object which is expected to be seen from a position of the surveying apparatus body in the aimed direction by calculation, based on the aimed direction measured by the angle-measuring portion, said design data and the positional data of the surveying apparatus body; and
 - a displaying portion ~~for displaying~~ configured to display said model of the expected arrangement at completion of the object obtained by the calculation with the arithmetic processing portion,
 - wherein said arithmetic processing portion is configured to display, according to a change in the aimed direction, said model of the expected arrangement at completion of the object

relative to the changed aimed direction on the displaying portion based on detection of said angle-measuring portion.

2. (Currently Amended) The electronic surveying apparatus according to claim 1, further comprising a telescope portion for viewing an object to be measured which corresponds to said expected arrangement at completion of the object, and an imaging portion ~~for imaging~~ configured to image the measurement object viewed by the telescope portion,

said aimed direction being a viewing direction, wherein

said displaying portion is ~~capable of displaying~~ configured to display the measurement object imaged by said imaging portion as a real image of the measurement object, and

said arithmetic processing portion ~~displays~~ is configured to display said model of the expected arrangement at completion of the object on the displaying portion, directly or by overlapping said model of the expected arrangement at completion of the object with said real image obtained by the imaging portion through the telescope portion.

3. (Currently Amended) An electronic surveying apparatus, comprising:

a telescope portion for viewing an object to be measured;

an imaging portion ~~for imaging~~ configured to image the measurement object in an aimed direction viewed by the telescope portion;

a displaying portion ~~for displaying~~ configured to display the measurement object imaged by said imaging portion as a real image of the measurement object;

a storing portion ~~for storing~~ configured to store positional data of a surveying apparatus body and design data as construction-related data;

an angle-measuring portion ~~for measuring~~ configured to measure the aimed direction relative to a reference direction; and

an arithmetic processing portion ~~for obtaining~~ configured to obtain a model of an expected arrangement at completion of an object which is expected to be seen from a position of the surveying apparatus body in the aimed direction by calculation, based on the aimed direction measured by the angle-measuring portion, said design data and the positional data of the surveying apparatus body; ~~and~~

wherein the arithmetic processing portion is a displaying portion configured to display said model of the expected arrangement at completion of the object obtained by the calculation ~~with~~ of the arithmetic processing portion on the displaying portion, and

wherein the arithmetic processing portion is configured to display said model of the expected arrangement at completion of the object on the displaying portion by overlapping said model of the expected arrangement at completion of the object with said real image obtained by the imaging portion through the telescope portion.

4. (Cancelled).

5. (Cancelled).

6. (Currently Amended) The electronic surveying apparatus according to claim 1, wherein said arithmetic processing portion ~~calculates~~ is configured to calculate, based on the positional data of the surveying apparatus body including height thereof, the aimed direction which the angle-measuring portion has detected as a horizontal angle and a vertical angle, and the design data, said model of the expected arrangement at completion of the object expected to be seen from the position including the height of the surveying apparatus body, and ~~displays~~ display said calculated model of the expected arrangement at completion of the object on the displaying portion.

7. (Cancelled).

8. (Currently Amended) The electronic surveying apparatus according to claim 1, further comprising a ranging portion ~~for ranging~~ configured to range a distance from the surveying apparatus body to said measurement object,

wherein said arithmetic processing portion ~~calculates~~ is configured to calculate said model of the expected arrangement at completion of the object based on the distance ranged by said ranging portion, the aimed direction measured by the angle-measuring portion, said design data and the positional data of the surveying apparatus body.

9. (Cancelled).

10. (Currently Amended) The electronic surveying apparatus according to claim 1, wherein said arithmetic processing portion ~~zooms~~ is configured to zoom said model of the expected arrangement at completion of the object and ~~displays~~ display the zoomed model of the expected arrangement at completion of the object on the displaying portion according to magnification when the magnification of the telescope portion is variable.

11. (Cancelled).

12. (Currently Amended) The electronic surveying apparatus according to claim 1, wherein said arithmetic processing portion ~~calculates~~ is configured to calculate an allowable range with respect to said model of the expected arrangement at completion of the object based on said design data, and ~~displays~~ display the allowable range on said displaying portion by overlapping the allowable range with said model of the expected arrangement at completion of the object.

13. (Cancelled).

14. (Currently Amended) The electronic surveying apparatus according to claim 3, wherein said arithmetic processing portion ~~displays~~ is configured to display, according to a change in the aimed direction, said model of the expected arrangement at completion of the object relative to the changed aimed direction on the displaying portion based on detection of said angle-measuring portion.

15. (Currently Amended) The electronic surveying apparatus according to claim 3, wherein said arithmetic processing portion ~~calculates~~ is configured to calculate, based on the positional data of the surveying apparatus body including height thereof, the aimed direction which the angle-measuring portion has detected as a horizontal angle and a vertical angle, and the design data, said model of the expected arrangement at completion of the object expected to be seen from the position including the height of the surveying apparatus body, and ~~displays~~ display said calculated model of the expected arrangement at completion of the object on the displaying portion.

16. (Currently Amended) The electronic surveying apparatus according to claim 3, further comprising a ranging portion ~~for ranging~~ configured to range a distance to said measurement object,

wherein said arithmetic processing portion ~~calculates~~ is configured to calculate said model of the expected arrangement at completion of the object based on the distance ranged by said ranging portion, the aimed direction measured by the angle-measuring portion, said design data and the positional data of the surveying apparatus body.

17. (Currently Amended) The electronic surveying apparatus according to claim 3, wherein said arithmetic processing portion ~~zooms~~ is configured to zoom said model of the expected arrangement at completion of the object and ~~displays~~ display the zoomed model of the expected arrangement at completion of the object on the displaying portion according to magnification when the magnification of the telescope portion is variable.

18. (Currently Amended) The electronic surveying apparatus according to claim 3, wherein said arithmetic processing portion ~~calculates~~ is configured to calculate an allowable range with respect to said model of the expected arrangement at completion of the object based on said design data, and ~~displays~~ display the allowable range on said displaying portion by overlapping the allowable range with said model of the expected arrangement at completion of the object.

19. (New) An electronic surveying apparatus, comprising:
a telescope portion for viewing an object to be measured;
an imaging portion configured to image the measurement object in an aimed direction viewed by the telescope portion;
a displaying portion configured to display the measurement object imaged by said imaging portion as a real image of the measurement object;
a storing portion configured to store positional data of a surveying apparatus body and design data as construction-related data;
an angle-measuring portion configured to measure the aimed direction relative to a reference direction; and
an arithmetic processing portion configured to obtain a model of an expected arrangement at completion of an object which is expected to be seen from a position of the surveying apparatus body in the aimed direction by calculation, based on the aimed direction

measured by the angle-measuring portion, said design data and the positional data of the surveying apparatus body,

wherein the arithmetic processing portion is configured to display said model of the expected arrangement at completion of the object obtained by the calculation of the arithmetic processing portion on the displaying portion, and

wherein the arithmetic processing portion is configured to display said model of the expected arrangement at completion of the object on the displaying portion according to a change in the aimed direction based on detection of said angle-measuring portion.

20. (New) The electronic surveying apparatus according to claim 19, wherein said arithmetic processing portion is configured to calculate, based on the positional data of the surveying apparatus body including height thereof, the aimed direction which the angle-measuring portion has detected as a horizontal angle and a vertical angle, and the design data, said model of the expected arrangement at completion of the object expected to be seen from the position including the height of the surveying apparatus body, and display said calculated model of the expected arrangement at completion of the object on the displaying portion.

21. (New) The electronic surveying apparatus according to claim 19, further comprising a ranging portion configured to range a distance to said measurement object,

wherein said arithmetic processing portion is configured to calculate said model of the expected arrangement at completion of the object based on the distance ranged by said ranging portion, the aimed direction measured by the angle-measuring portion, said design data and the positional data of the surveying apparatus body.

22. (New) The electronic surveying apparatus according to claim 19, wherein said arithmetic processing portion is configured to zoom said model of the expected arrangement at

completion of the object and display the zoomed model of the expected arrangement at completion of the object on the displaying portion according to magnification when the magnification of the telescope portion is variable.

23. (New) The electronic surveying apparatus according to claim 19, wherein said arithmetic processing portion is configured to calculate an allowable range with respect to said model of the expected arrangement at completion of the object based on said design data, and display the allowable range on said displaying portion by overlapping the allowable range with said model of the expected arrangement at completion of the object.